What is claimed is:

1. A method for reducing overall network delays and efficient management of ATM resources, the method comprising:

adding an α Byte of routing information to a front portion of an ATM cell header when processing a cell having end destination information, so that the destination information is not lost, allowing interfacing between each network element to perform cell processing and routing operations with a single cell switching operation.

2. A method of switching an asynchronous transfer mode (ATM) cell having a payload portion and a header portion comprising:

adding an information field before the header portion of the ATM cell;

processing the ATM cell having a total of more than 53 bytes; and

forwarding the ATM cell after the information field is removed.

3. The method of claim 2, wherein the ATM cell during processing has $(53+\alpha)$ bytes, and α is a size of the information field.

4. The method of claim 3, wherein information regarding an end destination of the ATM cell is included in the information field.

5. A method of processing an asynchronous transfer mode (ATM) cell comprising:

performing cell switching on a received ATM cell;

adding routing information in front of a header of the ATM cell that has been switched; and

forwarding the ATM cell according to the added routing information without any further cell switching.

6. The method of claim 5, wherein the received ATM cell has a size of 53 bytes.

7. The method of claim 6, wherein the added routing information has a size of 1 byte.

8. The method of claim 7, wherein the forwarded ATM cell has a size of 53 bytes, after the 1 byte routing information has been removed.

9. The method of claim 5, further including a step of processing the ATM cell before forwarding.

10. The method of claim 9, wherein the processing step comprises a changing of an ATM adaptation layer (AAL) type or a changing of payload information.

11. An asynchronous transfer mode (ATM) cell switching system comprising:

a first memory to receive and store an ATM cell to be handled;

a cell switching unit to receive the ATM cell stored in the first memory, and to assign an appropriate path for the ATM cell to be forwarded to; and

a cell processor to receive and process the ATM cell from the cell switching unit, and to output the ATM cell without going through the cell switching unit.

12. The system of claim 11, wherein the cell processor comprises:

a second memory to receive and store the ATM cell having the appropriate path assigned thereto from the cell switching unit;

a cell processing unit to receive the ATM cell stored in the second memory, and to process the ATM cell; and

a third memory to receive and store the ATM cell processed by the cell processing unit, and to output the ATM cell without going through the cell switching unit.

13. The system of claim 12, wherein the cell switching unit provides an output to a physical layer and to a loop back, or an output for further processing.

14. The system of claim 13, wherein the cell switching unit adds an end destination field in front of a header of the ATM cell.

15. The system of claim 14, wherein the added end destination field is maintained as the ATM cell passes through the second memory, the cell processing unit, and the third memory.

16. The system of claim 15, wherein the third memory outputs directly to a physical layer or to a loop back in accordance with the end destination field.

17. The system of claim 11, wherein the cell switching unit requires a one virtual path identifier / virtual channel identifier (VPI/VCI) and one type of routing information for any received ATM cell.

18. The system of claim 12, wherein the cell processing unit processes the received ATM cell by changing an ATM adaptation layer (AAL) type or by changing payload information.

19. An asynchronous transfer mode (ATM) cell format used during cell switching comprising:

a payload;

a header in front of the payload; and

an information field in front of the header, the information field containing an end destination for the payload.

20. The ATM cell format of claim 19, wherein the information field has a size of 1 byte.

21. The ATM cell format of claim 19, wherein the payload has a size of 48 bytes and the header has a size of 5 bytes.